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Macfarlane

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(54) **BEACH UMBRELLA WITH TELESCOPING POLE AND BASE PLATE**

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A45B 3/00	(2006.01)
F16M 13/00	(2006.01)
A45B 23/00	(2006.01)

(52) **U.S. Cl.**
CPC ***F16M 13/00*** (2013.01); ***A45B 25/00*** (2013.01); *A45B 2023/0012* (2013.01)

(58) **Field of Classification Search**
CPC A45B 3/00; A45B 5/00; A45B 1/00; A45B 2023/0012; F16M 13/00; F16M 13/02; F16M 2200/08; E04H 12/2238; E04H 12/2215; E04H 12/2261
USPC 135/15.1, 16, 98, 902, 34.2; 248/156, 248/545, 519, 523, 530, 533, 218.4; 108/50.11, 50.12
See application file for complete search history.

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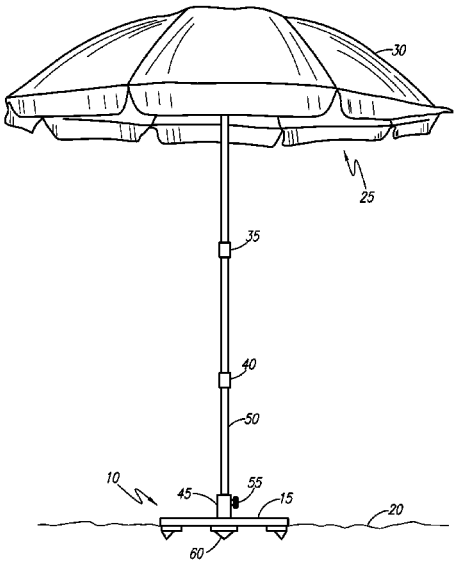
(57) **ABSTRACT**

A support stand for a beach umbrella or similar structure that requires support is described. The support stand includes a base plate having an upwardly extending attachment cylinder for receiving a pole of an item the needs support. The bottom of the support stand includes a plurality of pivotally attached projections for extending into the ground to provide support. The projections are biased open but can be selectively folded flat against the bottom of the support stand and then held in place for transportation or storage. The support stand includes a handle and pole attachment features the enable one handed transportation.

18 Claims, 3 Drawing Sheets



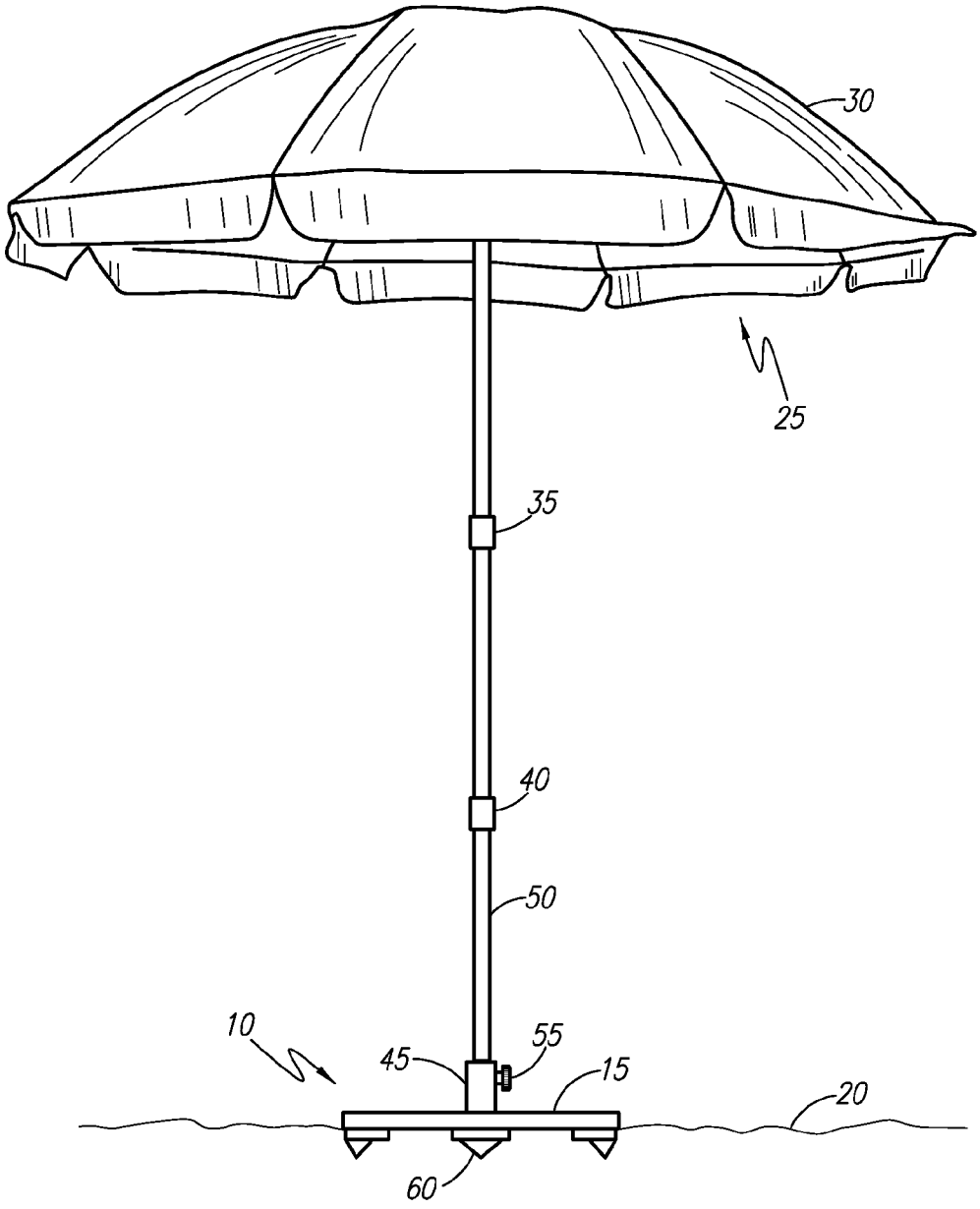


FIG. 1

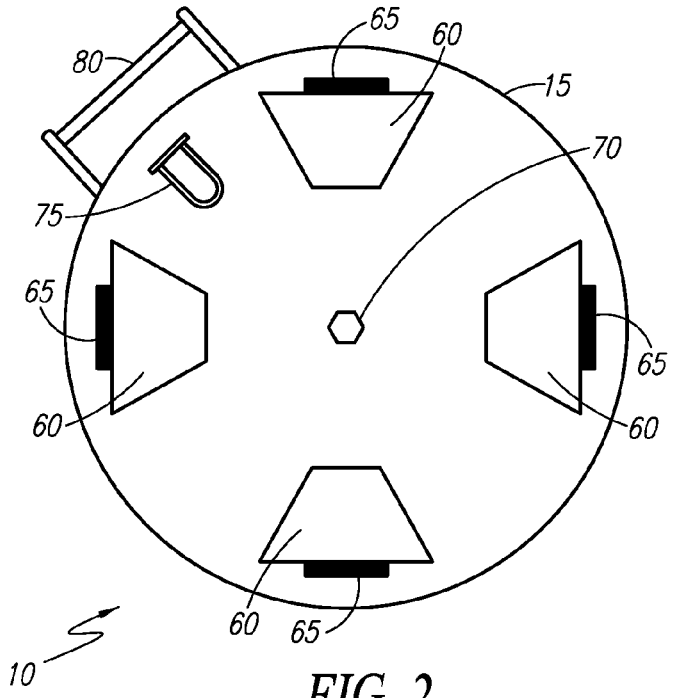


FIG. 2

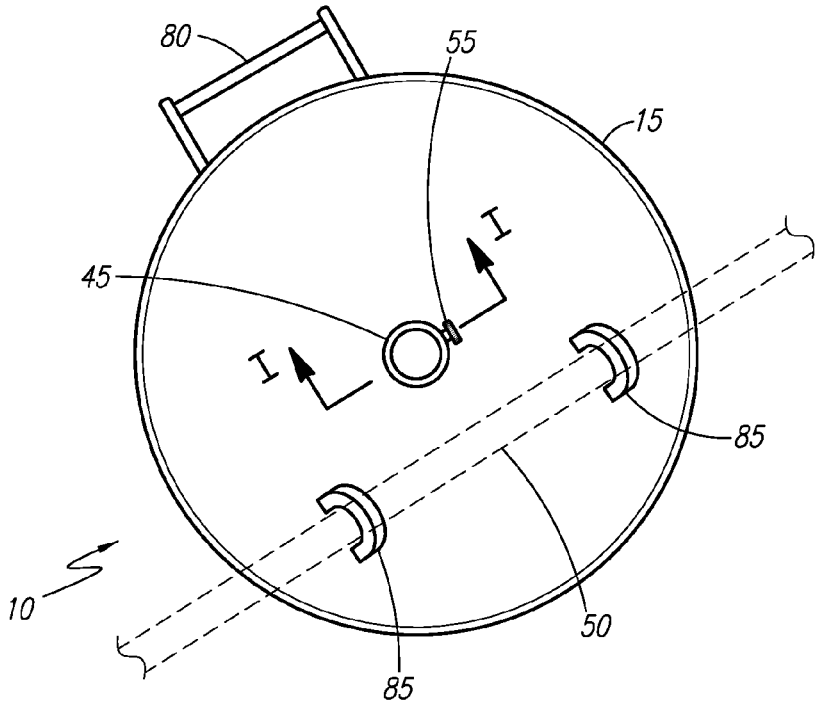


FIG. 3

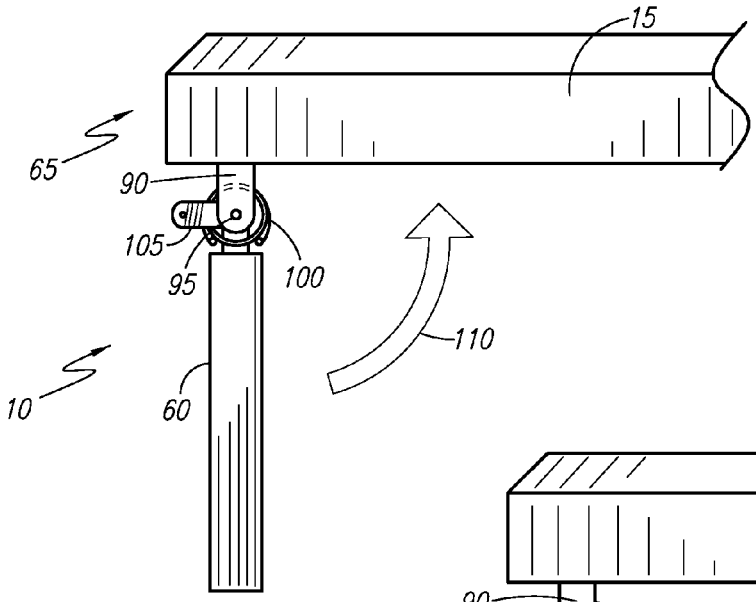


FIG. 4A

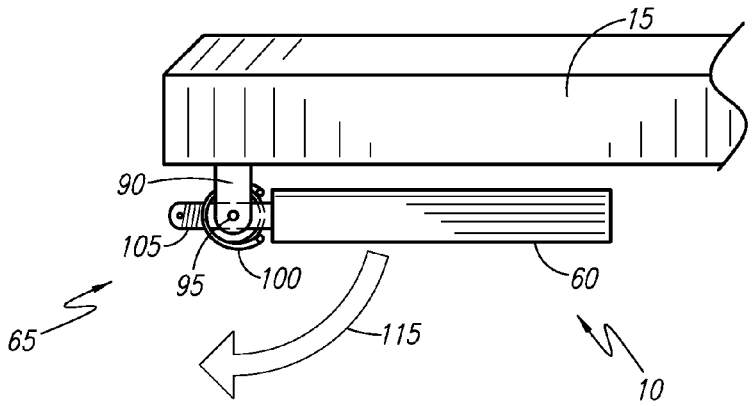


FIG. 4B

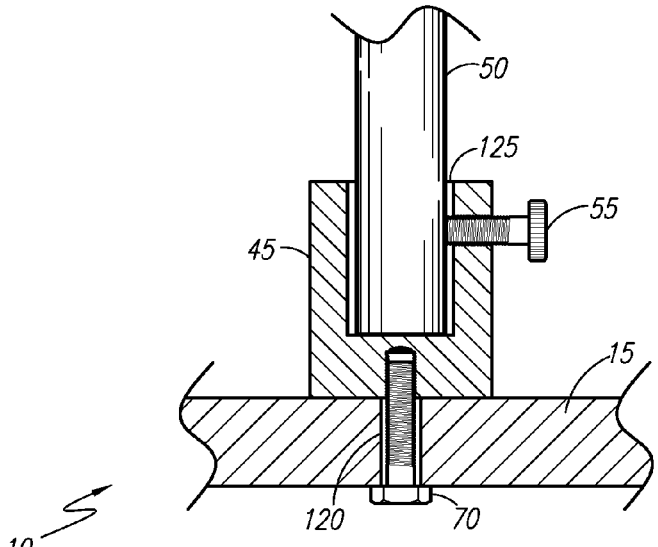


FIG. 5

BEACH UMBRELLA WITH TELESCOPING POLE AND BASE PLATE

RELATED APPLICATIONS

There are no current co-pending applications.

FIELD OF THE INVENTION

The presently disclosed subject matter is directed towards a beach sun shades. More particularly the present invention relates to beach umbrellas having base plates with pivotal projections for securing in the beach umbrella in place.

BACKGROUND OF THE INVENTION

Very few leisure time activities can rival spending a warm summer day at the beach. The sun, sand, relaxation, time with family and friends make the beach very popular. However, at times the sun and the heat it produces can be overwhelming.

To block the sun many people use beach umbrellas. Beach umbrellas not only provide sun protection but privacy as well. While beach umbrellas have proven very successful they are not without problems. As is well known beach umbrellas are prone to becoming dislodged, falling over, getting blown away, and become hazards. Such actions often damage umbrellas beyond repair, requiring costly replacement. Even slight breezes can create problems.

The tendency for beach umbrellas to pull out of the sand is aggravated by not inserting the umbrella far enough. Pushing an umbrella poll into the sand can be difficult even for those that have great physical strength. In addition umbrella surface areas, sand textures, sand moisture, and wind all tend to pull umbrellas out of the sand over time.

Accordingly, there exists a need for a device by which beach umbrellas can be firmly fastened into sand to withstand windy conditions. Preferably such a device would not require great physical strength, pounding into the sand, or even tools. Beneficially such device would enable beach umbrellas to be used in different sand conditions, environmental conditions, and the like. Ideally such devices would be useful with a range of beach umbrellas and would incorporate a mechanism for easily attaching a beach umbrella. Such a device that prevents loss and damage to beach umbrellas would be particularly useful.

SUMMARY OF THE INVENTION

The principles of the present invention provide for a support system for attaching beach umbrellas or similar structure to sand so as to withstand windy conditions.

A support system in accord with the present invention includes a support base with a top and a bottom and an attachment sleeve that extends from the top. An attachment fastener passes through the support base to retain the attachment sleeve in place. The system further includes first and second triangular-shaped appendage for penetrating into a grade. The first and second triangular-shaped appendages are hinged mounted by first and second hinges to the bottom of the support base. In practice the attachment fastener can pass through the center of the support base while a pole fastener, such as a thumbscrew, is threaded into the side of the attachment sleeve.

The first triangular-shaped appendage is beneficially about four inches (4 in.) wide at the base, one inch (1 in.) wide at the tip, and approximately four-and-a-half inches (4½ in.) along each angled side, while the support base is beneficially circular. The support base preferably includes a hanging hook near its perimeter as well as a carrying handle. In practice the support system will further include a third triangular-shaped appendage; a fourth triangular-shaped appendage, a third hinge assembly attaching the third triangular-shaped appendage to the bottom, and a fourth hinge assembly attaching the fourth triangular-shaped appendage to the bottom. The support system is particularly useful for supporting a beach umbrella having a lower support tube, a canopy, a height adjustment system, and an angle adjustment system. In use the lower support tube is inserted into the attachment sleeve.

Another support system in accord with the present invention includes a support base having a top and a bottom and an attachment sleeve that extends from the top. An attachment fastener passes through the support base to retain the attachment sleeve in position. The support system further includes a first triangular-shaped appendage, a second triangular-shaped appendage, a third triangular-shaped appendage, a fourth triangular-shaped appendage, a first hinge assembly attaching the first triangular-shaped appendage to the bottom, a second hinge assembly attaching the second triangular-shaped appendage to the bottom, a third hinge assembly attaching the third triangular-shaped appendage to the bottom, and a fourth hinge assembly attaching the fourth triangular-shaped appendage to the bottom. An attachment fastener passes through the center of the support base, while a pole fastener threads into a side of the attachment sleeve. Beneficially the pole fastener is a thumbscrew and the support base is substantially circular.

Preferably the support base includes a hanging hook near its perimeter, a carrying handle, and a pair of fastening clamps. The support base can work with a beach umbrella having a lower support tube, a canopy, a height adjustment system, and an angle adjustment system. In that case the lower support tube is inserted into the attachment sleeve.

BRIEF DESCRIPTION OF THE DRAWINGS

The advantages and features of the present invention will become better understood with reference to the following more detailed description and claims taken in conjunction with the accompanying drawings, in which like elements are identified with like symbols, and in which:

FIG. **1** is a side view of a support system **10** for beach umbrellas **30** that is in accord with the preferred embodiment of the present invention;

FIG. **2** is a bottom view of a support base **15** used with the support system **10** shown in FIG. **1**;

FIG. **3** is a top view of the support base **15** shown in FIG. **2**;

FIG. **4***a* is detailed view of a triangular-shaped appendages **60** used with the system **10** shown in a deployed state;

FIG. **4***b* is detailed view of the triangular-shaped appendages **60** shown stowed; and,

FIG. **5** is a section view of the support base **15** taken along line I-I of FIG. **3**.

DESCRIPTIVE KEY

10 surface support system for beach umbrellas
15 support base
20 grade
25 beach umbrella
30 canopy
35 height adjustment system
40 angle adjustment system
45 attachment sleeve
50 lower support tube

55 securing fastener
60 triangular-shaped appendage
65 hinge assembly
70 attachment fastener
75 hanging hook
80 carrying handle
85 fastening clamp
90 base mounting bracket
95 appendage pivot
100 spring assembly
105 release lever
110 first travel path arrow
115 second travel path arrow
120 opening
125 upper opening

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The best mode for carrying out the invention is presented in terms of its preferred embodiment, herein depicted within FIGS. **1** through **5**. However, the invention is not limited to the described embodiment, and a person skilled in the art will appreciate that many other embodiments of the invention are possible without deviating from the basic concept of the invention and that any such work around will also fall under scope of this invention. It is envisioned that other styles and configurations of the present invention can be easily incorporated into the teachings of the present invention, and only one particular configuration shall be shown and described for purposes of clarity and disclosure and not by way of limitation of scope.

The terms "a" and "an" herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced items.

FIG. **1** presents a side view of a support system **10** used to support a beach umbrella **25** according to the preferred embodiment of the present invention. The support system **10** includes a support base **15** which rests upon a grade **20** such as sand, dirt, grass, gravel, rock or the like. The support base **15** supports the beach umbrella **25**, which has a conventional design. The beach umbrella **25** includes a canopy **30**, a height adjustment system **35** and an angle adjustment system **40**. While FIG. **1** shows a beach umbrella **25** it should be noted that other similar structures such as a dining canopy, an awning, a tent, or the like also could benefit from the support system **10**. As such it should be understood that the present invention is not necessarily restricted to use with beach umbrellas **25**. However, beach umbrellas **25** can clearly benefit from the present invention.

The support system **10** includes an attachment sleeve **45** for holding a lower support tube **50**. The lower support tube **50** is retained in the attachment sleeve **45** by a securing a fastener **55** such as a threaded thumbscrew. The securing fastener **55** and the attachment sleeve **45** provide a strong physical connection that ensures that the lower support tube **50** and subsequently the beach umbrella **25** will not become dislodged from the support base **15** by wind or other forces.

Referring now to FIG. **2**, a bottom view of the support base **15**, the support base **15** is envisioned as being approximately ten to twelve inches (10-12 in.) in diameter. However, larger and smaller versions could be produced. Thus the specific size is not intended to be a limiting factor of the invention.

Referring to FIGS. **1** and **2**, the bottom of the support base **15** includes a plurality of triangular-shaped appendages **60** which penetrate into the grade **20** for additional holding power. The triangular-shaped appendages **60** (four (4) shown in the preferred embodiment) are shown in FIG. **2** folded or stowed state to allow for ease of storage and transport, while FIG. **1** shows them extended. The folding capability is provided by a hinge assembly **65** at each of the triangular-shaped appendages **60**.

Each triangular-shaped appendage **60** is envisioned as being approximately four inches (4 in.) wide at the base, one inch (1 in.) wide at the tip, and approximately four-and-a-half inches (4½ in.) along each angled sides. An attachment **70**, such as a bolt, passes through the center of the support base **15**. The attachment **70** is used to fasten the attachment sleeve **45** (as shown in FIG. **1**) to the support base **15**. Additionally, the support base **15** includes a hanging hook **75** near the edge of the support base **15**. The hanging hook **75** is used to hang the support base **15** from a standard wall hook for storage. Finally, the support base **15** includes a carrying handle **80** to facilitate carrying the support base **15**.

It is envisioned that the support base **15** is made of heavy, dense and strong material such as steel, iron, possibly aluminum, or even a heavy or weighted plastic. The support base **15** beneficially weights approximately ten to fifteen pounds (10-15 lbs). This provides a weighted platform while still enabling easy carrying of the support base **15**.

FIG. **3** presents a top view of the support base **15**. The carrying handle **80** is clearly shown. Also shown at the center of the support base **15** are the attachment sleeve **45** and the securing fastener **55**. A pair of fastening clamps **85** is located on support base **15**, beneficially opposite the carrying handle **80**. The fastening clamps **85** hold the lower support tube **50** (partially shown via dashed lines for purposes of illustration) of the beach umbrella **25** when the lower support tube **50** is stored. The fastening clamps **85** enable easy transportation of the support system **10**, including a beach umbrella **25** as one unit. Thus both the support system **10** and the beach umbrella **25** can be carried single handedly via the carrying handle **80**.

FIGS. **4***a* and **4***b* show detailed views of the triangular-shaped appendages **60** and hinge assemblies **65**. Each triangular-shaped appendage **60** is attached to the support base **15** by a hinge assembly **65**. Each hinge assembly **65** includes a base mounting bracket **90**, an appendage pivot **95**, a spring assembly **100**, and a release lever **105**. Being spring-loaded the triangular-shaped appendages **60** can easily be placed in the deployed or active position as shown in FIG. **4***a*. When the release lever **105** is pressed, the triangular-shaped appendages **60** can each be folded against the bias provided by the spring assembly **100** to the bottom of the support base **15** as shown by a first travel path arrow **110**. When fully folded the triangular-shaped appendages **60** are locked in place by the release lever **105**. This is shown in FIG. **4***b*. Such folding reduces the likelihood of contact with objects, surfaces, or individuals when the support system **10** is being carried. When the release lever **105** releases the triangular-shaped appendages **60** the spring assembly **100** forces the triangular-shaped appendages **60** to pivot on the mounting bracket **90** using the appendage pivot **95** to move along the second travel path arrow **115** for deployment.

FIG. **5** presents a section view of the support base **15** taken along line I-I of FIG. **3** with the support base **15** shown in a partial view due to illustrative limitations. The attachment **70** passes through an opening **120** in the support base **15** to engage the attachment sleeve **45**. Tightening the attachment **70** tightens the attachment sleeve **45** against the support base **15** such that the attachment sleeve **45** is held tight. The lower support tube **50** of the beach umbrella **25** (see FIG. **1**) is placed into an upper opening **125** until it is fully seated. Finally, the securing fastener **55** is twisted until contacts the lower support tube **50** to hold it in place. The securing fastener

55 can be disengaged to allow for easy removal of the beach umbrella 25 for storage and transportation.

It is envisioned that other styles and configurations of the present invention can be easily incorporated into the teachings of the present invention, and only one particular configuration shall be shown and described for purposes of clarity and disclosure and not by way of limitation of scope.

It is envisioned that other styles and configurations of the present invention can be easily incorporated into the teachings of the present invention. While only one particular configuration is shown and described that is for purposes of clarity and disclosure and not by way of limitation of scope.

The preferred embodiment of the present invention can be used by the common user in a simple and effortless manner with little or no training. It is envisioned that the support system 10 would be constructed and used in general accordance with FIG. 1 through FIG. 5. The support base 15 along with its associated components could be used with a conventional beach umbrella 25 or manufactured and sold with a specific beach umbrella 25 for use with the support base 15. Should assembly of the beach umbrella 25 be pursued, standard and well-known manufacturing methods would be applied. In addition, the support base 15 can be used with other devices such as canopies that required a solid support.

In use the support system 10 would be carried to a desired spot on the beach, yard, park, or other location where shade and protection is desired. The lower support tube 50 attached to the beach umbrella 25 is disengaged from the fastening clamps 85 and set aside. Next, the triangular-shaped appendages 60 are deployed by releasing the release lever 105 and allowing the triangular-shaped appendages 60 to move along the second travel path arrow 115 as shown in FIG. 4*b*. That process is repeated for each of triangular-shaped appendages 60. The support base 15 is then placed into the grade by pushing it downward until the lower surface of the support base 15 is against the grade.

The lower support tube 50 is then inserted into the attachment sleeve 45 as shown in FIG. 5. The inserted lower support tube 50 is then secured in place the use the securing fastener 55. The beach umbrella 25 is then adjusted in height and angle by use of the height adjustment system 35 and the angle adjustment system 40, respectively. When use is complete the user would reverse the aforementioned process for storage.

The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A support system, comprising:
- a support base having a center, a top and a bottom;
- an attachment sleeve extending from said top;
- an attachment fastener passing through said support base to retain said attachment sleeve in position;
- a first triangular-shaped appendage for penetrating into a grade;
- a second triangular-shaped appendage for penetrating into a grade;
- a first hinge assembly attaching said first triangular-shaped appendage to said bottom; and,
- a second hinge assembly attaching said second triangular-shaped appendage to said bottom.

2. The support system according to claim 1, wherein said attachment fastener passes through said center.

3. The support system according to claim 1, further including a pole fastener threading into a side of said attachment sleeve.

4. The support system according to claim 3, wherein said pole fastener is a thumbscrew.

5. The support system according to claim 1, wherein said support base is substantially circular.

6. The support system according to claim 5, further including a hanging hook near the perimeter of said support base.

7. The support system according to claim 1, wherein said support base includes a carrying handle.

8. The support system according to claim 1, further including a third triangular-shaped appendage; a fourth triangular-shaped appendage, a third hinge assembly attaching said third triangular-shaped appendage to said bottom, and a fourth hinge assembly attaching said fourth triangular-shaped appendage to said bottom.

9. The support system according to claim 1, further including a beach umbrella having a lower support tube, a canopy, and a height adjustment system, wherein said lower support tube is inserted into said attachment sleeve.

10. A support system, comprising:
- a support base having a center, a top and a bottom;
- an attachment sleeve extending from said top;
- an attachment fastener passing through said support base to retain said attachment sleeve in position;
- a first triangular-shaped appendage;
- a second triangular-shaped appendage;
- a third triangular-shaped appendage;
- a fourth triangular-shaped appendage;
- a first hinge assembly attaching said first triangular-shaped appendage to said bottom;
- a second hinge assembly attaching said second triangular-shaped appendage to said bottom;
- a third hinge assembly attaching said third triangular-shaped appendage to said bottom; and,
- a fourth hinge assembly attaching said fourth triangular-shaped appendage to said bottom.

11. The support system according to claim 10, wherein said attachment fastener passes through said center.

12. The support system according to claim 11, further including a pole fastener threading into a side of said attachment sleeve.

13. The support system according to claim 12, wherein said pole fastener is a thumbscrew.

14. The support system according to claim 10, wherein said support base is substantially circular.

15. The support system according to claim 14, further including a hanging hook near the perimeter of said support base.

16. The support system according to claim 15, wherein said support base includes a carrying handle.

17. The support system according to claim 10, further including a beach umbrella having a lower support tube, a canopy, and a height adjustment system, wherein said lower support tube is inserted into said attachment sleeve.

18. The support system according to claim 10, further including a pair of fastening clamps attached to said support base, said fastening clamps for attaching a pole to said support base.

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